Superfund Proposed Plan

U.S. Environmental Protection Agency, Region II

Radiation Technology, Inc., Superfund Site

Rockaway Township, New Jersey

March 2014

EPA ANNOUNCES PROPOSED PLAN

This Proposed Plan identifies the Preferred Alternative to address contaminated buildings and structures at the Radiation Technology, Inc., (RTI) Superfund Site in Rockaway Township, New Jersey. In addition, this Plan includes summaries of cleanup alternatives evaluated for use at the Site. The proposed remedy addresses on-site contaminated buildings/structures contaminated with polychlorinated biphenyls (PCBs); asbestos-containing material (ACM) and lead. This Proposed Plan was developed by the U.S. Environmental Protection Agency (EPA), the lead agency for the Site, in consultation with the New Jersey Department of Environmental Protection (NJDEP), the support agency. EPA, in consultation with NJDEP, will select a final remedy for contaminated buildings/structures at the Site after reviewing and considering all information submitted during a 30-day public comment period. EPA, in consultation with NJDEP, may modify the Preferred Alternative or select another response action presented in this Plan based on new information or public comments. Therefore, the public is encouraged to review and comment on all the alternatives presented in this Proposed Plan.

EPA is issuing this Proposed Plan as part of its public participation responsibilities under Section 117(a) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund). This Proposed Plan summarizes information that can be found in greater detail in the final remedial investigation (RI) report and final focused feasibility study (FFS) report and other documents contained in the Administrative Record file for this Site.

SITE DESCRIPTION

The former RTI Site is located at 108 Lake Denmark Road, Rockaway Township, New Jersey, near the small residential community of Lake Telemark, New Jersey, in the western portion of Morris County. The area around the Site is generally low-density residential properties. The Picatinny Military Arsenal is located to the west of the Site. Areas to the east of the Site consist of mainly single-family residences. In 2006, the entire Site was designated as a federal Superfund Site. The Site consists of 263 acres of land (see Figure 1-1) and is divided into the following developed areas: RTI Area (15 acres), currently occupied by Sterigenics International, which is not part of this Proposed Plan, East Stand Area (22 acres), South Stand Area (27 acres), and P2 Area (16 acres). The remaining portion (183 acres) consists of undeveloped wooded land. The RTI Area and the undeveloped land are not included as

MARK YOUR CALENDARS

Public Comment Period
March 24 – April 23, 2014
EPA will accept written comments on the Proposed Plan during the public comment period.

Public Meeting
April 3, 2014 at 7:30 P.M.
EPA will hold a public meeting to explain the Proposed Plan and all of the alternatives presented in the Focused Feasibility Study Report. Oral and written comments will also be accepted at the meeting. The meeting will be held at the Rockaway Township Municipal Building, located at 65 Mount Hope Road, Rockaway, New Jersey 08341 at 7:30pm.

For more information, see the Administrative Record at the following locations:

EPA Records Center, Region 2
290 Broadway, 18th Floor
New York, New York 10007-1866
(212) 637-4308
Hours: Monday-Friday – 9 A.M. to 5 P.M.

Rockaway Township Free Public Library
61 Mount Hope Road
Rockaway, New Jersey 08341
(973) 627-2344
Hours: Monday - Friday 9 am to 9 pm

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part of this Proposed Plan. The four developed areas of the Site are restricted from public access by a fence. A 1994 Record of Decision (ROD) for Operable Unit (OU) 1 selected a remedy to address contaminated groundwater Site wide. A pre-design investigation is underway. A 2011 ROD for OU2 was issued for a drum-disposal area found during an investigation of Site soils. A remedial action is expected to be completed in 2014. OU3 consists of 34 historically industrial or commercial structures. Most of the structures are in poor condition after having been vacant and/or having received no maintenance since 2006.

SITE HISTORY

Background/Site Characteristics

The Site is located in a predominantly rural area in the western portion of Morris County, New Jersey, at 108 Lake Denmark Road in the Township of Rockaway. It is situated approximately five miles north of Exit 37 of Interstate 80.

Prior to 1941, the RTI Superfund Site was owned by the Singer Manufacturing Company. Reaction Motors, Inc., purchased the property in 1941 and in approximately 1947 began the construction of facilities to support rocket motor and component testing programs. Reaction Motors, Inc., was acquired by a corporate predecessor to the Olin Corporation in 1953 and thereafter by Thiokol Chemical Corporation (Thiokol) in 1958. In 1964, Reaction Motors, Inc., was formally combined with Thiokol and became a separate working division within the company. A 1991 RI Report provides a detailed summary of historical building use by Reaction Motors and Thiokol. In 1972, RTI purchased a 15-acre parcel of the Site (now known as the RTI Area) and conducted irradiation activities until it sold these operations in 1996. In 1978, RTI purchased the remaining 248 acres of the Site from Thiokol and leased portions of the property to various tenants. Sterigenics International continues to occupy buildings within the RTI Area.

Beginning in 1980, NJDEP and the Rockaway Township Health Department conducted numerous inspections of the Site. These inspections revealed that drums containing solvents and other organic chemicals were being improperly stored and disposed of by the owner and operator of the Site, Radiation Technology, Inc.

In 1981, the Rockaway Township Health Department sampled two on-Site water supply wells. Results indicated that volatile organic compounds (VOCs) had contaminated the groundwater supplying these wells. They subsequently were condemned by the New Jersey Department of Health and the NJDEP, and were closed. On July 6, 1983, NJDEP and RTI signed a judicial Consent Order, which required RTI to install ground water monitoring wells and collect samples for VOC analyses to determine the source of the contamination.

In August 1984, NJDEP issued a Site Evaluation Report with the objective of identifying sources of groundwater contamination at and around the RTI property. The results of the well sampling and analysis indicated that elevated levels of VOCs were present in the samples analyzed. Subsequently, the Site was placed on the National Priorities List (NPL) of Superfund sites in September 1984.

On March 12, 1987, RTI entered into an Administrative Order on Consent (AOC) with NJDEP and agreed to pay the cost of an investigation into the nature and extent of contamination at the Site. On December 12, 1992, RTI signed a second AOC with NJDEP, agreeing to perform some cleanup activities at the Site. In May 1993, under NJDEP supervision, RTI removed and disposed of abandoned tanks and drums off Site resulting from the above investigation. On May 9, 1994, NJDEP issued a ROD for OU1, selecting groundwater extraction and treatment as the remedy for the most-contaminated portion of the Site.

The State of New Jersey entered into an AOC with RTI and Thiokol Corporation to reimburse NJDEP costs for a portion of the RI/FS and to conduct design and remedial activities for contaminated groundwater under NJDEP oversight. Pursuant to the ACO and a Settlement Agreement, Thiokol Corporation paid certain monies to RTI and RTI agreed to complete the investigation and remediation of the Site. RTI began working on the remedial design soon after the ROD was signed in 1994. However, RTI wished to alter the remedy. Under NJDEP oversight, RTI performed several pilot studies of *in situ* chemical oxidation between 1995 and 1997. The results of these studies were inconclusive and RTI resumed design for the ROD-designated remedy in 1998. The groundwater remedy was partially designed, but work was suspended in early 1999 due to financial difficulties of RTI.

In January 2000, RTI filed for Chapter 11 bankruptcy. In November 2000, the NJDEP requested that the EPA assume the lead for the Site, to which the EPA agreed in January 2001. RTI's bankruptcy petition was dismissed by the Court in December 2000 for RTI's failure to file the required reports and pay appropriate fees.

REMEDIAL INVESTIGATION

In May 2004, EPA negotiated a Consent Decree with Alliant Techsystems, Inc. (ATK) (a successor to Thiokol, a former owner and operator of the Site), to undertake the groundwater cleanup. In September 2004 and April 2005, ATK conducted groundwater sampling as part of a preliminary design investigation to obtain a better understanding of the groundwater contamination conditions and to confirm the viability of the groundwater remedy selected in the 1994 ROD. The results indicated that further sampling would be necessary and ATK recommended that additional monitoring wells be installed. Presently, ATK is conducting an in-situ pilot test involving the injection of emulsified oils into the fractured bedrock to determine the effectiveness of this technology to treat groundwater contamination. Final pilot test sampling results are expected in March 2014. In October 2004, ATK and EPA entered into an AOC to investigate potential sources of groundwater contamination at the Site. ATK conducted a preliminary assessment of a waste/drum disposal area located within the active former RTI complex. The waste/drum disposal area investigation led to the selection of a remedy for the drum material and surrounding contaminated soils in a 2011 ROD for OU2. The selected remedy included excavation and off-site disposal and/or treatment.

The OU3 RI/FFS for buildings and structures remaining on-site began in 2012. The RI/FFS work was conducted by E&E, pursuant to an Interagency Agreement with the United States Army Corps of Engineers at the direction of the EPA. During the OU3 RI, the following portions of the site were investigated (see Figure 1-2):

- East Stand Area (22 acres);
- South Stand Area (27 acres); and
- P2 Area (16 acres).

Initially, E & E's Technical Memorandum summarized the review of 34 buildings/structures, which determined that 26 of the 34 buildings needed additional sampling. After further review, a total of 25 buildings/structures remained to be sampled for the RI. A cultural resource investigation was conducted for the RI and consisted of a National Register of Historic Places (NRHP) eligibility evaluation of 34 structures and buildings plus five additional structures (e.g., guard house, water towers) within these areas but not technically within the survey. A notification to the NJDEP State Historic Preservation Officer regarding the potential for listing the site on the National Register of Historic Places and (check with Steve F). E & E's RI fieldwork included areas only in OU3 (East Stand Area, South Stand Area, and P2 Area), including the 25 buildings/structures that were identified as requiring additional sampling in the Technical Memorandum. The OU3 areas of the site are currently fenced and posted to restrict public access. Most buildings/structures on-site are dilapidated or in poor condition, having been vacant since at least 2006.

Investigations in 199 and 20 assessed the 15 acre RTI (now Steregenics) property and the 183-acre undeveloped wooded land and concluded that no further studies were needed. These areas do not need to be addressed by a remedy and were not carried forward as part of the RI/FFS.

SCOPE AND ROLE OF THE ACTION

EPA is addressing the cleanup of the Site in three phases, called operable units. This Proposed Plan for OU3, addresses contaminated buildings and structures found at the Site. As stated earlier, EPA previously conducted two separate studies that concluded with RODs for OU1 (site groundwater) and OU2 (drum disposal area). This is expected to be the final action for the Site.

SUMMARY OF SITE RISKS

As part of the RI/FFS, a Screening-Level Risk Assessment (SLRA) was conducted to estimate current and future effects of contaminants on human health. A standard Baseline Human Health Risk Assessment could not be performed, since the bulk building materials sampled are not available for reasonable dermal, ingestion or inhalation exposure. The SLRA, however, is a screening analysis for potentially hazardous substances on-site where there is a release or threat of release into the environment which could constitute a public health or environmental hazard. The concentrations of contaminants found in the various bulk material samples were compared with Removal Management Screening Levels (which assume residential use) and risk-based screening levels for residential and industrial soils from EPA's Regional Screening Tables. So while the steps of a SLRA differ from a standard Baseline Human Health Risk Assessment, the application of the major concepts is the same. An ecological risk assessment was not done because buildings are not considered an ecological habitat. A SLRA was previously conducted that indicated that concentrations of contaminants detected in surface soil, surface water and sediment at the RTI Site are unlikely to pose any unacceptable risks to terrestrial or aquatic receptors of concern identified at the RTI Site.

Hazard Identification:

PCBs

Various buildings and structures had elevated levels of metals and PCBs in the concrete bulk samples, PCBs in caulk, as well as remnants of oil sludge in standing water and containers in the buildings. PCB sampling results ranged from 0 to 65 milligrams per kilogram (mg/kg) with an anomalous detection of 680 mg/kg. These results exceeded the NJDEP Non-Residential Direct Contact Health Based Screening Criteria and Soil Remediation Standards.

Asbestos

A total of 98 bulk samples of suspect ACM were collected and submitted for analysis. Different types of ACM (thermal system insulation and/or miscellaneous) were identified in 15 buildings/structures out of total of 34 at the RTI Site: East Stand Area (seven buildings); South Stand Area (four buildings) and P2 Area (four buildings). A total of 44 ACMs were confirmed through laboratory results to contain asbestos. Two areas with suspected ACM could not be sampled due to accessibility issues, and as such were assumed to be ACM. These materials include both friable asbestos materials (that can be crumbled, pulverized, or reduced to powder under hand pressure) and non-friable organically bound asbestos materials. The condition of all of the buildings and structures was identified as poor.

Lead

A total of 424 X-ray fluorescence (XRF) readings were taken within the 21 identified structures with suspect components. An XRF is an X-ray instrument used for routine, relatively non-destructive chemical analyses of rocks, minerals, sediments and fluids. A total of 36 chips from different building components and locations throughout East Stand, South Stand and P2 Areas (where surfaces were identified) were collected and sent to EMSL Analytical, Inc., for analysis. Lead (including lead-based paint (LBP)) was identified by XRF screening as present in poor condition within all three project areas on concrete walls, window sills, metal columns, and metals doors. Out of 36 chip samples tested, 19 samples had lead concentrations

WHAT ARE THE "CONTAMINANTS OF CONCERN" (COCs)?

The COCs in OU3 (buildings and structures) are primarily asbestos, PCBs, and lead.

Asbestos-contaning material (ACM): The term "asbestos" refers to a group of naturally occurring silicate minerals separable into commercially usable fibers, including chrysotile (serpentine), amosite (cumingtonite-grunerite), crocidolite (riebeckite), tremolite, anthophyllite and actinolite. According to NESHAP, any material containing more than one percent asbestos is classified as ACM (NESHAP 40 CFR Part61). Asbestos use was common through the 1970s for fireproofing purposes, but started to decline from 1973 to 1978 when EPA banned all spray applied asbestos materials.

Polychlorinated Biphenyls (PCBs): PCBs were widely used as a fire preventative and insulator in the manufacturing of transformers and capacitors because of their ability to withstand exceptionally high temperatures. PCBs are considered probable human carcinogens and are linked to other adverse health effects such as developmental effects, reduced birth weights and reduced ability to fight infection.

Lead: Exposure to excessive levels of lead can cause brain damage; affect a child's growth; damage kidneys; impair hearing; cause vomiting, headaches, and appetite loss; and cause learning and behavioral problems. In adults, lead can increase blood pressure and can cause digestive problems, kidney damage, nerve disorders, sleep problems, muscle and joint pain, and mood changes.

WHAT IS RISK AND HOW IS IT CALCULATED?

A Superfund baseline human health risk assessment is an analysis of the potential adverse health effects caused by hazardous substance releases from a Site in the absence of any actions to control or mitigate these under current- and future-land uses. This was not completed for the Site, however a Screening-Level Risk Assessment (SLRA) was performed. While the steps of a SLRA differ from a standard Baseline Human Health Risk Assessment, the application of the major concepts is the same. The adapted four-step process utilized for assessing site-related contaminants and potential human health risks for is described below.

Hazard Identification: In this step, the chemicals of potential concern (COPCs) at the Site in various media (*i.e.*, soil, groundwater, surface water, and air) are identified based on such factors as toxicity, frequency of occurrence, and fate and transport of the contaminants in the environment, concentrations of the contaminants in specific media, mobility, persistence, and bioaccumulation.

Exposure Assessment: In this step, the different exposure pathways through which people might be exposed to the contaminants identified in the previous step are evaluated. Examples of exposure pathways include incidental ingestion of and dermal contact with contaminated building materials. Factors relating to the exposure assessment include, but are not limited to, the concentrations in specific media that people might be exposed to and the frequency and duration of that exposure. Using these factors, a "reasonable maximum exposure" scenario, which portrays the highest level of human exposure that could reasonably be expected to occur, is calculated.

Health Effects Assessment: Normally a toxicity assessment, in this step, the types of adverse health effects associated with contaminant exposures are determined. Potential health effects are chemical-specific and may include the risk of developing cancer over a lifetime or other non-cancer health hazards, such as changes in the normal functions of organs within the body (*e.g.*, changes in the effectiveness of the immune system). Some chemicals are capable of causing both cancer and non-cancer health hazards.

Risk Characterization: This step could not be performed due to the nature of the contamination at the Site. In a standard risk assessment process, characterization summarizes and combines outputs of the exposure and toxicity assessments to provide a quantitative assessment of Site risks for all COPCs.
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greater than 0.5 percent by dry weight, or 1 milligram per square centimeter (mg/cm^2), and are considered to contain LBP. The condition of all of the buildings and structures was identified as poor.

Exposure Assessment: Since the site is presently unused, the only human exposures likely to occur under existing conditions are occasional brief exposures of site trespassers. Since the buildings and structures are in poor condition, environmental conditions could lead to a release of PCBs, ACM and/or lead to the environment. Potential lead exposure could most likely result from incidental ingestion of lead containing dust and chips. Inhalation of airborne dust is also possible, but is less likely than incidental ingestion and would probably result in much smaller exposures.

Health Effects Assessment:

Asbestos

Asbestos fibers can enter the body through inhalation, ingestion, and absorption. Health effects involving exposure to asbestos fibers include lung cancer, mesothelioma (cancer of pleural or peritoneal cavity linings), gastrointestinal cancers, asbestosis (scarring of the lungs), and other forms of lung diseases.

Lead

Exposure to excessive levels of lead can cause brain damage; affect a child's growth; damage kidneys; impair hearing; cause vomiting, headaches, and appetite loss; and cause learning and behavioral problems. In adults, lead can increase blood pressure and can cause digestive problems, kidney damage, nerve disorders, sleep problems, muscle and joint pain, and mood changes.

PCBs

Exposure to excessive levels of PCBs is linked to other adverse health effects such as developmental effects, reduced birth weights and reduced ability to fight infection.

Uncertainties

There are a number of sources of uncertainty in this SLRA, primarily due to the lack of complete quantitative risk calculations. Several chemicals that were measured analytically in the bulk materials lack screening levels because they lack quantitative toxicity values. Other chemicals exist in several forms that can be measured analytically but for which separate toxicity values have not been established. In these cases screening levels for the parent compound or a very closely related compound were used as surrogates. In general, bulk building materials are not analyzed and included in risk assessments due to limited human health exposure. However, an action was warranted at this Site due to the extremely deteriorated condition of the buildings and lack of security at the Site, allowing potential trespassers to access deteriorated structures and become exposed to contaminated materials that pose a risk to human health.

REMEDIAL ACTION OBJECTIVES

Based on the SLRA identification of exposure pathways, the following list of Remedial Action Objectives (RAOs) for OU3 was developed for protection of human health and the environment:

Prevent direct and dermal contact with, and inhalation or ingestion of, PCBs from transformer oil, caulking compounds, and contaminated concrete and cinderblock;

Prevent direct and dermal contact with, and ingestion of, contaminated water, sediment, and sludge in aboveground storage tanks and sumps;

Prevent the release or the threat of release of lead-based paint into the environment resulting from deterioration of on-site structures; and

Prevent the release or the threat of release of asbestos into the environment resulting from deterioration of on-site structures.

Remedies and development of groundwater RAOs are not part of OU3 and are not included as part of this FFS. Additionally, although one sub-slab soil exceedence was detected, due to the nature of the alternatives, it is not anticipated that contaminated soil will be disturbed during remedial activities. PCBs were found in some building media such as water, sediment and sludge in aboveground storage tanks and will be addressed with rest of buildings/structures. Remediation of the structure (including a concrete slab) with sub-slab contamination will be limited to encapsulation or the scarification of the top surface and it is not anticipated that full foundation demolition and removal will be conducted. However, the extent of building/structure demolition and/or selective removal may change during the remedial design process based on new information such as building stability.

There are no principal threat wastes in this OU.

WHAT IS A "PRINCIPAL THREAT"?

The NCP establishes an expectation that EPA will use treatment to address the principal threats posed by a site wherever practicable (NCP Section 300.430(a)(1)(iii)(A)). The "principal threat" concept is applied to the characterization of "source materials" at a Superfund site. A source material is material that includes or contains hazardous substances, pollutants or contaminants that act as a reservoir for migration of contamination to ground water, surface water or air, or acts as a source for direct exposure. Contaminated ground water generally is not considered to be a source material; however, Non-Aqueous Phase Liquids (NAPLs) in ground water may be viewed as source material. Principal threat wastes are those source materials considered to be highly toxic or highly mobile that generally cannot be reliably contained, or would present a significant risk to human health or the environment should exposure occur. The decision to treat these wastes is made on a site-specific basis through a detailed analysis of the alternatives using the nine remedy selection criteria This analysis provides a basis for making a statutory finding that the remedy employs treatment as a principal element.

SUMMARY OF REMEDIAL ALTERNATIVES

All of the remedial alternatives except Alternative 1 include long-term monitoring of the Site and institutional controls (in the form of a deed notice) to limit future land uses because contamination remains underneath the concrete slabs. Only alternative 2 will require operation and maintenance (O&M). Institutional controls are administrative and legal controls that help to minimize the potential for human exposure to contaminants. Given the expected future use for this Site, unrestricted use would not be anticipated. New Jersey‘s promulgated standard for unrestricted use would require that, at a minimum, land use would need to be controlled to prevent unrestricted (e.g., residential) use. All alternatives would result in contamination remaining on-site above levels that would allow unrestricted use; therefore, five-year reviews are required.

Alternative 1 - No Action

Total Capital Cost	$0
Annual O&M	$0
Total Present Net Worth	$0
Timeframe	0 years (yrs)

Regulations governing Superfund program remedy selection require that the “no action” alternative be evaluated to establish a baseline for comparison to other alternatives. Under this alternative, EPA would take no action at the Site to prevent potential exposure to buildings/structures contamination.

Alternative 2 – Building Decontamination and Encapsulation

Total Capital Cost	$1,507,000
Annual O&M	$23,000
Total Present Net Worth	$2,560,000
Timeframe	1 yr + 30 yrs O&M

Under this alternative, selective building rehabilitation would be undertaken. This includes the cleaning and encapsulation of contaminated concrete and cinderblock; removal of source caulk and sealant material (PCB concentrations greater than 0.2 ppm); collection and disposal of contaminated surface water, oils, sludge, and sediment; and abatement of ACM and lead. This alternative assumes that non-hazardous debris that is scattered around many of the structures will only be removed if it is necessary for remedy implementation. Under this alternative O&M refers to

the monitoring the competency of the encapsulation to prevent leaching of PCBs to surface and necessary repairs to ensure its integrity.

Alternative 3 – Structure Demolition/Selective Removal

Total Capital Cost	$1,963,000
Annual O&M	$0
Total Present Net Worth	$1,990,000
Timeframe	2 yrs

Under this alternative, selective building demolition and off-site waste disposal would be undertaken. This alternative includes either complete demolition of the buildings/structures or scarification of contaminated concrete surfaces. This alternative also includes removal of concrete bulk materials, PCBs in caulk, as well as remnants of oil sludge in standing water, oils, sludge, and sediment; and abatement of ACM and lead. Abatement of lead is only required for structures that would not be demolished, and abatement prior to demolition of a structure is not required as the bulk waste can be disposed of or recycled together under New Jersey regulations. This alternative assumes that non-hazardous debris that is scattered around many of the structures will only be removed if it is necessary for remedy implementation.

EVALUATION OF ALTERNATIVES

Nine criteria are used to evaluate the different remediation alternatives individually and against each other in order to select a remedy. This section of the Proposed Plan profiles the relative performance of each alternative against the nine criteria, noting how it compares to the other options under consideration. The nine evaluation criteria are discussed below. The "Detailed Analysis of Alternatives" can be found in the FFS.

THE NINE SUPERFUND EVALUATION CRITERIA

1. Overall Protectiveness of Human Health and the Environment evaluates whether an alternative eliminates, reduces, or controls threats to public health and the environment through institutional controls, engineering controls, or treatment.

2. Compliance with Applicable or Relevant and Appropriate Requirements (ARARs) evaluates whether the alternative meets federal and state environmental statutes, regulations, and other requirements that pertain to the site, or whether a waiver is justified.

3. Long-term Effectiveness and Permanence considers the ability of an alternative to maintain protection of human health and the environment over time.

4. Reduction of Toxicity, Mobility, or Volume (TMV) of Contaminants through Treatment evaluates an alternative's use of treatment to reduce the harmful effects of principal contaminants, their ability to move in the environment, and the amount of contamination present.

5. Short-term Effectiveness considers the length of time needed to implement an alternative and the risks the alternative poses to workers, the community, and the environment during implementation.

6. Implementability considers the technical and administrative feasibility of implementing the alternative, including factors such as the relative availability of goods and services.

7. Cost includes estimated capital and annual operations and maintenance costs, as well as present worth cost. Present worth cost is the total cost of an alternative over time in terms of today's dollar value. Cost estimates are expected to be accurate within a range of +50 to -30 percent.

8. State/Support Agency Acceptance considers whether the State agrees with the EPA's analyses and recommendations, as described in the RI/FS and Proposed Plan.

9. Community Acceptance considers whether the local community agrees with EPA's analyses and preferred alternative. Comments received on the Proposed Plan are an important indicator of community acceptance.

Overall Protection of Human Health and the Environment

Since Alternative 1 (no further action) would not address the risks posed by building contaminants, it would not be protective of human health and the environment.

The other two alternatives would provide adequate protection of human health and the environment by eliminating, reducing, or controlling risk through treatment, removal or containment. Contaminants would be removed or contained through Alternatives 2 (Building Decontamination and Encapsulation) and Alternative 3 (Structure Demolition/Selective Removal).

Because the "no action" alternative, Alternative 1, is not protective of human health and the environment, it was eliminated from further consideration under the remaining eight criteria

Compliance with ARARs
Actions taken at any Superfund site must meet all ARARs for federal and state law or provide grounds for invoking a waiver of these requirements. These include chemical-specific, location-specific, and action-specific ARARs. All chemical-specific, location-specific, and action-specific ARARs can be met for Alternatives 2 and 3. For buildings containing PCBs, both Alternative 2 and Alternative 3 meet the chemical-specific ARARs. Additionally, both Alternative 2 and Alternative 3 would prevent direct contact with contaminated surfaces and would comply with all ARARs. The Toxic Substances Control Act of 1976 is an ARAR for Alternatives 2 and 3 due to off-site transportation and disposal of PCB-contaminated material. Alternative 2 would comply with 40 CFR 761.30(p), regarding the use of PCB-contaminated surfaces. Under Alternative 3, PCB-contaminated materials would be remediated consistent with 40 CFR 761.79. RCRA is a federal law that mandates procedures for managing, treating, transporting, storing and disposing of hazardous substances. All portions of RCRA that are applicable or relevant and appropriate would be met by either Alternatives 2 or 3. Some of the structures at the Site have the potential to qualify as historic properties because of the activities of the rocket motor testing. As a result, further investigation must be performed to determine if the on-site structures qualify as historic properties. Both alternatives meet ARARs for ACM and LBP abatement.

Long-Term Effectiveness and Permanence
Alternatives 2 and 3 would provide some level of long-term effectiveness, assuming proper O&M of the encapsulation coatings. Alternative 2 would leave contaminated material on-site and require O&M; Alternative 3 offers more permanence since contaminated material is completely removed from the Site and no further O&M is required.

Reduction of Toxicity, Mobility, and Volume Through Treatment
For ACM and LBP, Alternative 2 does not reduce the toxicity or volume of the waste through treatment, but does reduce potential for mobility. However the decontamination process prior to encapsulation will reduce the toxicity, mobility, and volume of PCBs through treatment. Alternative 3 does not reduce the toxicity or volume since it just removes PCBs, ACM and LBP from the Site to another location, but it does reduce its potential for mobility.

Short-Term Effectiveness
Alternative 2 would take less time to implement than the Alternative 3 because this alternative involves less demolition, transportation, and disposal of contaminated wastes. However, Alternative 2 has maintenance monitoring period that is not necessary for Alternative 3 as all contaminated material addressed will be removed off-site. Most of the short-term impacts for remediation of the RTI Superfund Site are associated with noise, dust, and traffic associated with demolishing and disposing of site materials. Alternative 3 has a larger short-term impact. However, these impacts can be mitigated through standard health and safety measures. Also during remediation, all measures will be taken to lessen the truck traffic through the community.

Implementability
Alternative 3 would be easily implemented using conventional construction equipment and materials. Off-site hazardous and non-hazardous treatment/disposal of the contaminated building debris is available and disposal and would be feasible. Alternative 2 is a little more complicated to implement since it involves decontamination of some structures which can be more difficult than straight demolition.

Costs
The present-worth costs for Alternatives 1 through 3 are calculated based on each alternative's estimated timeframes to achieve remedial action objectives. The estimated capital, annual O&M, and present-worth costs for each of the alternatives are presented in the following table.

Alternative	Capital Cost	Annual O&M Cost	Total Present-Worth Cost
1	$0	$0	$0
2	$1,507,000	$23,000	$2,560,000
3	$1,963,000	$0	$1,990,000

State Acceptance
The NJDEP concurs with the preferred alternative.

Community Acceptance
Community acceptance of the preferred alternative will be evaluated after the public comment period ends and will be described in the ROD for this Site. Based on public comment, the preferred alternative could be

modified from the version presented in this proposed plan. The ROD is the document that formalizes the selection of the remedy for the Site.

PREFERRED ALTERNATIVE

The Preferred Alternative for achieving remedial action objectives for the OU3 portion of the Radiation Technology, Inc., Site is Alternative 3, Structure Demolition/Selective Removal.

The preferred alternative will address all four RAOs by removing any contaminated soil; eliminating direct contact and biological uptake exposures; permanently removing PCB-contaminated, asbestos-containing and lead-based paint materials. The extent of building/structure demolition and/or selective removal may change during the remedial design process, based on new information such as building stability.

Based on the information available at this time, EPA and the State of New Jersey believe the Preferred Alternative would satisfy CERCLA section 121 and be protective of human health and the environment, would comply with ARARs, would be cost-effective, and would utilize permanent solutions and alternative treatment technologies to the maximum extent practicable. The Preferred Alternative can change in response to public comment or new information.

Consistent with EPA Region 2's Clean and Green policy, EPA will evaluate the use of sustainable technologies and practices with respect to implementation of a selected remedy.

COMMUNITY PARTICIPATION

EPA and NJDEP provided information regarding the cleanup of the Radiation Technology, Inc. Superfund Site to the public through meetings, the Administrative Record file for the Site, and announcements published in the Daily Record. EPA and NJDEP encourage the public to gain a more comprehensive understanding of the Site and the Superfund activities that have been conducted. The dates for the public comment period, the date, the location and time of the public meeting, and the locations of the Administrative Record files, are provided on the front page of this Proposed Plan.

For further information on EPA's preferred alternative for the Radiation Technology Inc., Superfund Site:

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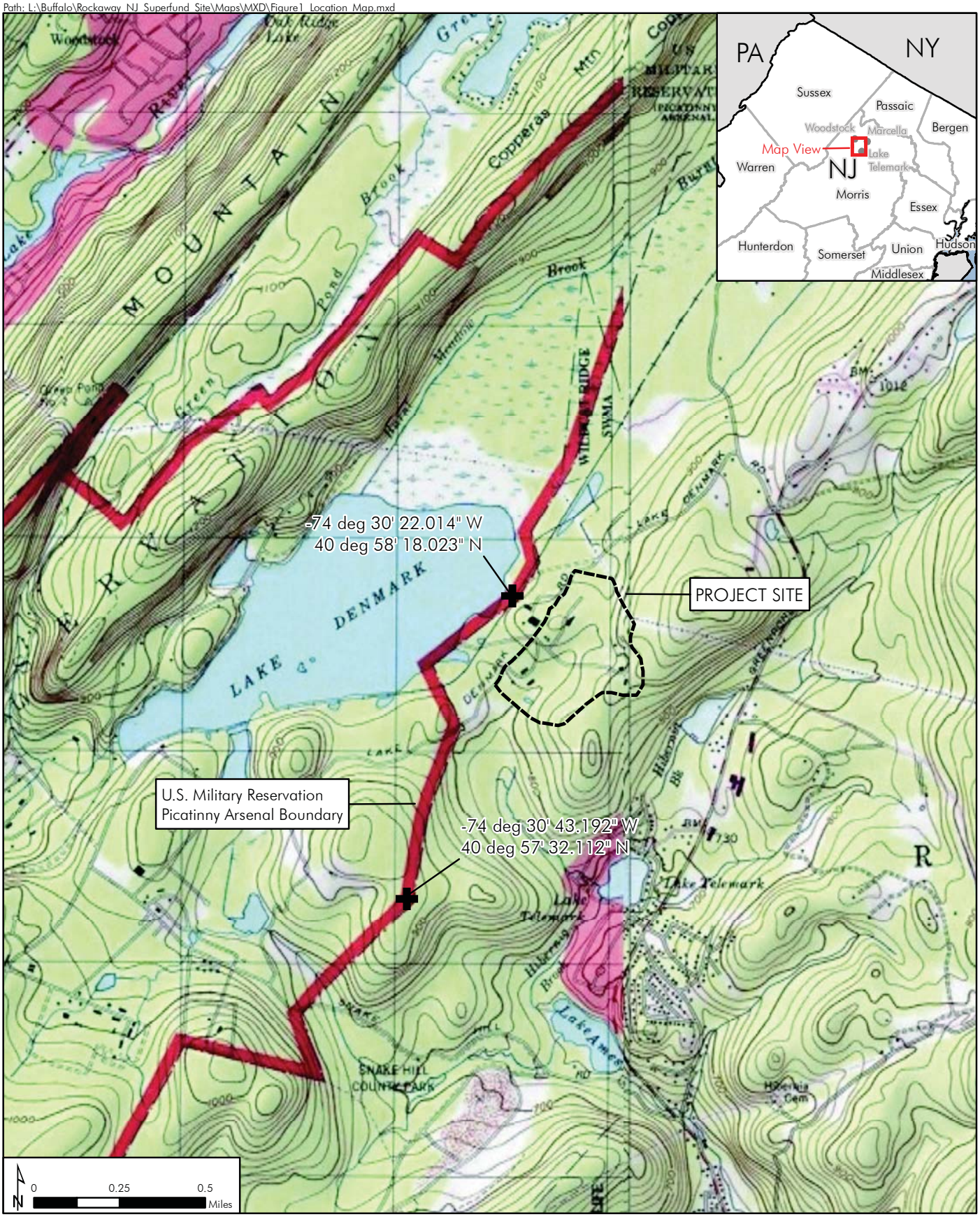
Toll-free (888) 283-7626

Path: L:\Buffalo\Rockaway_NJ_Superfund_Site\Maps\MXD\Figure1_Location_Map.mxd



Project Site

Figure 1-1
Site Location Map
Radiation Technology, Inc. Superfund Site
Rockaway Township, New Jersey

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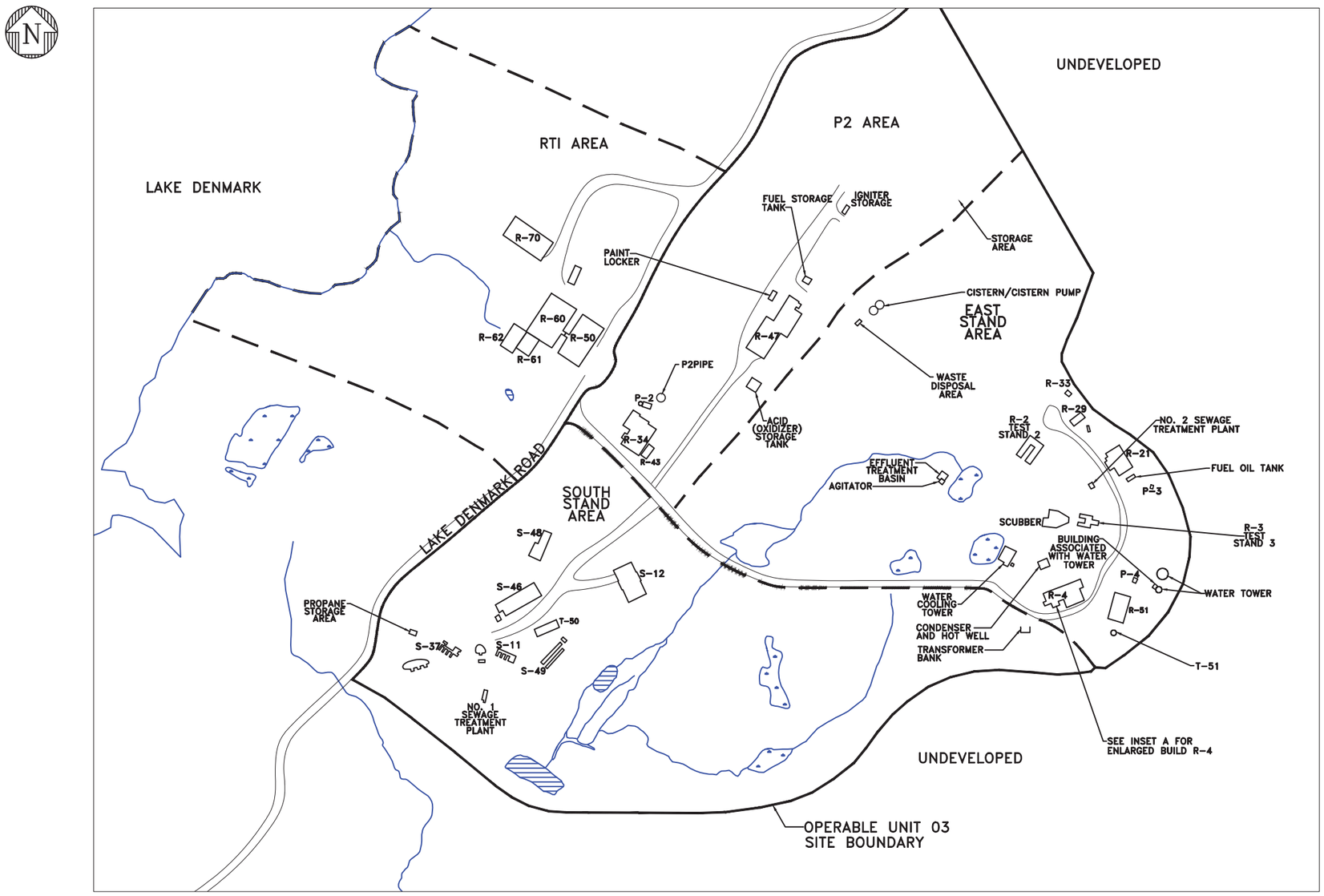

LEGEND

- STREAM
- MARSHY AREA
- WATER BODY
- SITE AREA BOUNDARY

RADTECH SITE FEATURES MAP
SCALE: 1" = 300'

APPROXIMATE SCALE IN FEET

0 300 600 900

ecology and environment

FIGURE 1-2 RADTECH SITE FEATURES MAP
RADIATION TECHNOLOGY SUPERFUND SITE, OU3
ROCKAWAY TOWNSHIP, NEW JERSEY

R2-0005850